





are in that part of the island ; and they do not appear to wander far away.

Ceylon, India eastward.

320. *GRACULUS SINENSIS*, Shaw.

Recorded by Layard ; I have not identified it.

Ceylon, India, Eastern Asia.

321. *GRACULUS JAVANICUS*, Horsf.

Very numerous in backwaters along the coast and in lakes inland. It may be seen in dozens perched on the stakes of the fishing-kraals, and will generally allow a boat or canoe to approach within a short distance.

Ceylon, India, Malaya.

322. *PLOTUS MELANOGASTER*, Forst.

I have seen this bird frequently at Aripo ; and it is common on some of the large inland tanks. It is also sometimes found near Colombo.

This species was first described and figured from Ceylon.

Ceylon, India, Burmah, Malaya.

*Addendum.*

323. *PRIONOCHILUS VINCENS*, Sclater\*.

Discovered by Mr. Vincent Legge, R.A., at the foot of the hills in the south of the island. It is described as frequenting the creeping plants entwining the trunks of the trees. The discovery of this new species in Ceylon is of considerable interest, as it is quite a Malay form, and no representative of the genus has yet been found in India. *Dicaeum* is its nearest ally in Ceylon.

“Bill black, paler below ; irides reddish ; feet brownish black.”

Ceylon.

7. Notes on a New Species of Tapir (*Tapirus leucogenys*) from the Snowy Regions of the Cordilleras of Ecuador, and on the Young Spotted Tapirs of Tropical America. By Dr. J. E. GRAY, F.R.S. &c.

[Received February 21, 1872.]

(Plates XXI. & XXII.)

The British Museum has lately received the skins and skeletons of seven Tapirs collected by Mr. Buckley in Ecuador, as under :—

1 & 11. An adult female and a nearly adult male with rather long hair, from Sunia, part of the snowy range of the Cordilleras.

\* See below, P. Z. S. for June 18.—P. L. S.

9. A very young, brown-cheeked, many-spotted, white-throated Tapir from Sunia. Mr. Buckley says that this specimen was in the company of the above adult female (No. 1), and he was enabled to capture it because she would not leave the young one, which he considers to be the young form of the grey-cheeked species. I am sorry to doubt this account, because, on comparing the skulls, the brain-case is globular and the line of the upper surface over the brain-case is arched as in *Tapirus terrestris*, very unlike the flat-topped skull of the grey-cheeked species. The spots are much more numerous and very differently disposed from those of the half-grown specimens with the grey cheeks; and the cheeks are brown, very unlike the cheeks of all the other older specimens of the grey-checked species. It would imply that the colour of the cheeks and the form and position of the spots alter as the animal increases in age.

3, 5, & 7. An adult male and female and a half-grown grey-cheeked specimen from Asuay, to the north-west of Macas.

13. A young striped male from Macas, on the river Macas or Maron, one of the branches of the Upper Amazons.

The restricted genus *Tapirus* may be divided into two sections according to the shape of the skull:—

I. *The brain-case of the skull flattened, with a straight top, and gradually raised above the plane of the nose.*

1. TAPIRUS PINCHACUS. Blackish. "Young many-spotted and striped; cheeks brown."
2. TAPIRUS LEUCOGENYS. Cheeks and underside of the head ashy white. Young with three or four interrupted stripes on the sides.

II. *The brain-case of the skull convex, rounded, the upper line arched, suddenly raised above the plane of the nose (cheeks brown).*

3. TAPIRUS TERRESTRIS.

The young specimens of this division, I think, indicate that there is more than one species confounded under this name, which I am inclined to separate.

TAPIRUS PINCHACUS.

M. Roulin discovered, about 1828, a species of Tapir on the Paraná on Quindiu and Suma Paz, during his residence at Bogota in New Granada.

He sent a specimen of the skull to Paris, which is figured by M. Blainville. M. Roulin sent a paper to the Academy of Sciences, on which M. Cuvier made a report, which is published in the *Ann. Sci. Nat.* vol. xviii. p. 107, 1827.

"La tête diffère déjà à l'extérieur de celle du Tapir commun par la forme générale, son occiput n'est pas saillant, sa nuque est ronde et n'a point cette crête charnue si remarquable dans l'espèce ordinaire;

tout le corps est couvert d'un poil très-épais d'un brun noirâtre plus foncé à la pointe qu'à la racine ; sur la croupe on voit de chaque côté une place nue large comme deux fois la paume de la main, et au-dessus de la division des doigts une raie blanche dépourvue de poil. Le menton a une tache blanche qui se prolonge vers la bouche et revient jusqu'à la moitié de la lèvre supérieure." (Ann. Sci. Nat. xvii. p. 109, 1827.)

Cuvier, in his report, observes :—"Mais les caractères distinctifs les plus frappants de cette espèce (le Pinchaque) ne se voient bien que dans son squelette. Les crêtes temporales sont beaucoup plus basses, et ne se rapprochent pas pour former, comme dans le Tapir commun, une crête unique et élevée, le bord inférieur de sa mâchoire est beaucoup plus droit, les os du nez sont plus forts, plus allongés et plus saillans ; sous ces divers rapports ce Tapir des Andes ressemble davantage à celui de Sumatra, et toutefois indépendamment de la couleur il en diffère par moins de hauteur proportionnelle de la tête.

"La tête du Tapir des Andes ainsi que celle du Tapir Oriental, ressemble plus que celle du Tapir ordinaire au Paléothérium." (Ann. Sci. Nat. xvii. p. 109, 1827.)

M. Roulin's memoir, read at the Academy, entitled "Mémoire pour servir à l'histoire du Tapir et description d'une espèce nouvelle appartenant aux hautes régions de la Cordillère des Andes," illustrated with figures of the animal and its skull and of the skulls of the Cayenne and Simatran Tapirs, is printed in the 18th volume, p. 26, of the 'Annales,' under the name of *Tapir pinchaque*. The animal is figured in t. 1, and its skull in t. 2. f. 1, 2, 3 ; and he sent the skull of the specimen to Paris.

In his memoir he merely observes he saw only two males, one adult and the other rather older, nearly the same size. He adds, "J'aurais désiré en faire transporter un à Bogotá pour pouvoir à le décrire à loisir, mais on refuse de me les vendre ; ainsi je dois me contenter d'en faire sur la place une description abrégée et d'en prendre au crayon un simple trait. Cependant j'obtins la tête et les pieds du plus grand, et le lendemain, à l'aide de ces pièces je pus terminer sous les yeux de l'Académie, elle est fait aux  $\frac{2}{15}$  de la grandeur naturelle (pl. 1)."

"Afin de reproduire plus *correctement* le profil de la tête je me suis servi pour en déterminer le contour, de la camera-lucida de Wolleston.

"On voit que cette tête diffère de celle des Tapirs communs par l'ensemble des lignes, aussi bien que par les détails. Le muffle est de forme un peu différente, et la trompe ne présente point des deux côtés ces rides qui montrent que l'animal la tient habituellement contractée. Le menton a une tache blanche qui se prolonge à l'angle de la bouche, et revient jusqu'à la moitié de la lèvre supérieure. L'oreille manque du liseré blanc qu'elle présente dans le Tapir commun ; on ne voit point non plus cette crête si remarquable qui commence sur le front, à l'hauteur des yeux, et se prolonge vers le garrot. Le cou de la nouvelle espèce est parfaitement rond, et les poils n'y ont, sur la ligne médiane, ni plus de longueur que dans les autres parties, ni une

direction différente. Le poil par tout le corps est très-épais, long, d'un brun noirâtre, plus foncé à l'a pointe qu'à la racine, et il donne à la robe cette couleur qu'on nomme zain chez les chevaux.

“Sur la croupe dans la région correspondante à la fosse iliaque, on voit de chaque côté une place nue, deux fois large comme la paume de la main; cette place n'est pas calleuse; le jeune la présentait aussi symétrique que le vieux, et d'une grandeur proportionnée.

“Au-dessus de la division des doigts on voit, comme dans l'espèce commune, une raie blanche dégarnie de poils.” (Ann. Sci. Nat. 1827, vol. xvii. p. 30.)

The figure represents the anterior part of the face and head to just behind the eyes much paler than the rest of the body, and differs in that respect most decidedly from the Grey-cheeked Tapir, which has the back of the head to the upper part of the temples paler than the rest of the head. It also represents the two large naked spots on the side of the upper part of the rump which in both specimens of the Grey-cheeked Tapir in the museum are entirely absent, these parts being covered with hair like the rest of the body.

“Comparée aux têtes des deux Tapirs la nouvelle ressemble plus à l'espèce de Sumatra qu'à celle de Cayenne. Cette ressemblance se montre surtout dans la direction du front, dans sa largeur, dans le défaut de saillie de la crête bi-pariétale, dans la dimension des os du nez, enfin dans la forme de la mâchoire inférieure, dont le bord inférieur est droit dans l'un et dans l'autre, tandis que dans le Tapir de Cayenne il est fortement arqué.” (Ann. Sci. Nat. vol. xviii. p. 29 & 32.)

M. Justin Goudot obtained a young female Tapir at an elevation of about 1400 mètres, nearly up to the snow-level, on the Peak of Tolimá in New Granada about 1843. He sent an account of the animal to the Academy of Sciences, Paris. MM. Geoffroy and Milne-Edwards prepared a report on his paper, which was published in the 'Comptes Rendus,' Paris, 1843, vol xvi. p. 381.

M. Goudot sent the skull of the young female to the Paris Museum; and it is figured in Blainville's 'Ostéographie,' along with the skull sent by M. Roulin, under the name of *Tapirus pinchacus*.

“C'était un jeune individu femelle qui portait encore à la partie postérieure du corps, les restes de sa livrée où l'on distinguait plusieurs bandes et taches oblongues d'un blanc sale; le pelage, très-fourni sur le corps, était d'un brun tirant sur le noir; les quatre jambes offraient des poils blancs clair-semés, surtout entre les cuisses; sous le ventre on en voyait aussi quelques-uns; des poils blancs autour l'organe femelle; il y avait aux quatre pieds une raie blanche sans poil; le bord des lèvres aux deux mâchoires était garni de poils gris avec l'extrémité brun; la trompe avait 80 millimètres depuis son extrémité jusqu'aux dents; l'animal la tenait inclinée ou pendante, la tête avait 54 centimètres de l'extrémité de la trompe jusqu'au bord interne de l'oreille; 80 millimètres de distance entre les deux oreilles; 38 centimètres du bout de la trompe jusqu'à la nuque; l'oreille longue de 115 millimètres avait son bord supérieur liseré de poils blancs, une petite touffe de poils blancs se voyait aussi en bas de son bord postérieur près la conque, le cou était rond, il n'y avait point, à la

croupe d'espace dénué de poil. Les chasseurs qui avaient tué depuis peu d'années un grand nombre de ses animaux (plus de 30 ou 40) m'assurent que l'espace nu de la croupe varie suivant les individus et qu'il se voit plus grand chez les vieux; ils croyaient que l'animal acquiert cette callosité par le frottement en glissant souvent sur un sol très-fortement incliné. Quoi qu'il en soit, plusieurs de ces peaux que j'ai vues conservées pour l'usage domestique (on s'en sert comme de couchettes) m'ont offert ces mêmes plaques plus ou moins étendues.

“Mes observations établissent aussi quelques points sur lesquels M. le Dr. Roulin n'avait pu offrir que des conjectures, savoir, 1° que la nouvelle espèce habite la Cordillère centrale aussi bien que la chaîne orientale; 2° que la livrée de la femelle est noire comme celle du mâle; 3° que le jeune porte la livrée comme celle de l'espèce commune; 4° que la place nue de la croupe qui paraît constante chez les adultes n'est point une disposition congénitale. M. Roulin avait fait remarquer l'absence du liseré blanc au bord de l'oreille des deux individus mâles qu'il avait observés; ma jeune femelle présentait ce liseré, mais la différence dépendait-elle du sexe ou de l'âge? C'est ce que je ne saurais décider.” (‘Comptes Rendus,’ vol. xvi. 1843, p. 334.)

These seem to be the only descriptions taken from the Columbian animal; and, indeed, these authors appear to be the only ones who have ever seen it in its perfect state.

Fischer, in his ‘Synopsis Mammalium’ published in 1829, changed the name Roulin gave to it to *Tapirus roulini*. Wagler, in his ‘Syst. des Amphib.’ published in 1830, gave the name of *Tapirus villosus* to this species; but these authors are only compilers, and only knew the animal from Roulin's description; they never saw it. And I cannot conceive why it was called *villosus*; for Roulin's figure certainly represents the animal with very short close hair.

The name *villosus* (or Hairy Tapir as it has been called by one) is not applicable to the specimens of *Tapirus leucogenys* brought by Mr. Buckley from Ecuador, which have the hair quite short and rigid as that of *T. terrestris*, but more abundant and closer, except in one nearly full-grown male from Sunia, which had the hair rather longer and softer.

It is also probably the Tapir mentioned by Mr. Robert B. White as seen on the Volcano of Puracé in the Central Cordillera, in the southern part of Columbia. He only saw it through a telescope at half a mile distance, and says it is greyish black; he says it is never found lower than 350 metres above the sea-level, and sometimes ascends to 400 metres (see Proc. Zool. Soc. 1870, p. 51). Dr. Sclater considers it the same as *Tapirus roulini* of Fischer. It is remarkable that all the specimens described by the French writers under the name of *T. pinchaque* came from Columbia, while the specimens of the White-cheeked Tapir (*T. leucogenys*) were obtained in Ecuador; and it would be curious if they should be distinct, as the French descriptions lead us to suspect. It would be curious to know what is the species said to be found in the Cordilleras further south in Peru. Tschudi, in the ‘Fauna Peruana,’ p. 213, says this species of Tapir

is found in Peru on the eastern slope of the Cordilleras, at an elevation of 7000 or 8000 feet, which is above the snow-line. He had never been able to see it, but thinks it is probably *Tapirus roulini*.

De Blainville, in his monograph of Tapirs in the 'Ostéographie,' gives a figure of the skull sent to the Paris museum by M. Roulin and of the younger one sent by M. Goudot, under the name of *T. pinchacus*.

In my monograph of the Tapirs in the 'Proceedings of the Zoological Society' for 1867, p. 884, I used this name, and gave an abstract of M. Goudot's paper as the only one derived from a personal examination of the animal.

I am not aware that any other remains of this animal but the two skulls in Paris exist in any museum in Europe or America. It is very desirable that specimens should be obtained from Columbia for the purpose of comparison with the specimens brought home by Mr. Buckley, to discover if the differences are real or only rest on the inaccuracy of the French observers: therefore it is much to be regretted that Mr. White failed in obtaining specimens for the Zoological Society. Since we obtained Mr. Buckley's specimens I have been offered for sale a skin from Ecuador; the writer informed me he had two skins, one of which he intended to present to the Smithsonian Institution; so that we may hope for more specimens from Ecuador; but as yet we have received none from Columbia.

If this species is from Columbia, which is yet to be determined by the comparison of specimens from that country, it will bear the following synonyma:—

#### TAPIRUS PINCHACUS.

*Tapir* "pinchaque," Cuvier, Ann. Sci. Nat. xvii. p. 107 (1829).

*Tapir pinchaque*, Roulin, Ann. Sci. Nat. xviii. (1829), p. 206, t. i. (animal), t. ii. f. 1, 2, 3 (skull); Goudot, Comptes Rendus, tom. xvi. p. 331 (1843).

*Tapirus roulini*, Fischer, Synops. Mamm. Add. p. 406 (1829); Wagner, Schreber's Säugethiere, vi. p. 392; White & Sclater, P. Z. S. 1870, p. 51.

*Tapirus villosus*, Wagler, Syst. des Amphib. p. 17 (1830).

*Tapirus pinchacus*, Blainville, Ostéog. Ungul. t. i. f. 5; Gray, P. Z. S. 1867, p. 884; id. Cat. Carn. Pach. et Edent. p. 259.

*Hab.* Cordilleras of Columbia.

#### TAPIRUS LEUCOGENYS. (The Grey-cheeked Tapir.) (Plate XXI.)

The adult is black, covered with close harsh hair, slightly grizzled at the tip; the head rather paler; the sides of the temple, cheeks, from the back of the eye to the base of the ears, and upper part of the sides of the neck, and whole underside of the head, ashy white varied with black; upper and lower lips pure white; ears with scarcely any indication of white edges, and covered with hair like the top of the head, but paler.

The rump in the old and younger specimens is uniformly covered with hair similar in colour, abundance, length, and texture to the rest



of the body, neither of them presenting any worn appearance or bare spot on the hinder part of the back.

A young female specimen which has a flat forehead is of a nearly uniform dark brown colour; it has three nearly continuous, pale ash-coloured, longitudinal lines, which are formed of more or less separate, oblong, elongated spots, and has a series of more obscure spots between them, which are larger and more distinct upon the underside of the belly; the side of the head and upper part of the neck, from the back edge of the eye, including the base of the ear, and the whole of the underside of the head, is ashy white, varied with brown hairs; the upper edge and the base of the outer edge of ears and lips white. The hinder part of the back in all the specimens is covered with hair like the rest of the animal.

*Hab.* Ecuador, on the Cordilleras at Sunia and Asuay.

The skull of this species agrees very well with the figures that De Blainville gives of the skulls brought home and presented to the Paris Museum of the Tapir Pinchaque, figured as *Tapirus pinchacus* in Blainville's 'Ostéographie;' but the description given by these authors of the external appearance of the adult and young of that species is so different from the specimens brought from Ecuador by Mr. Buckley that I am induced to regard them as a new species, quite different from the *T. pinchacus* of Columbia or New Granada.

The lower jaw of the old and young specimens of *T. leucogengs* brought by Mr. Buckley differs from the figure of the specimens brought by M. Roulin in the upper part of the hinder edge, which is more prominent than the lower part, which is most produced in Blainville's figure. They much better agree with Blainville's figure of the skull brought by M. Goudot, but have the upper a little more produced. The difference between the two skulls of Blainville may only be that of varieties.

I may observe the necks of the skins appear to be as much crested as that of *Tapirus terrestris*, and the brown hairs of the body with minute grey tips; the whole underside of the head, the cheeks, and sides of the temples are greyish white, which appear to be darker than the rest of the head in M. Roulin's figure.

One of the specimens brought by Mr. Buckley from Sunia, a male, had the hair longer and softer than the rest, but did not otherwise differ.

The adult female said to be the mother of the young specimen called *T. ænigmaticus* has very distinct white borders to the ends of the ears, and the whole of the hinder part and underside of the head is greyish black, the pale cheeks and throat not being so distinctly marked and defined as in the other specimens. This may be the character of the adult female; but the grey cheek in the younger female is quite as defined as in the male. The front of the face and the top of the head are considerably darker than the cheeks, very unlike the figure of the *Pinchaque*.

In this specimen the hair on the hinder part of the back is shorter and more sparse, and there are two elongated irregular patches, which have the hair more or less worn off, separated from each other by a

narrow hairy band, very unlike the round naked spots in the figure of the *Pinchaque*.

TAPIRUS LEUCOGENYS, jun., or T. ÆNIGMATICUS. (Plate XXII. fig. 1.)

Fur rather soft, abundant, and rather woolly, dark blackish brown, with grey tips to the hairs, which are more abundant on the sides of the face and front of the body. Back pale-spotted; the spots on the middle of the back small, oblong, forming two interrupted straight lines; the spots on the upper side of the back more elongate, and forming a rather curved line, terminating before it reaches the haunches. The shoulders, hams, sides of the body, thighs, and rump marked with irregularly disposed white spots, some of which are more or less perpendicular; those on the hinder part of the body and thighs larger and more elongate, and irregularly disposed; the lower part of the legs spotless, blackish brown. The upper lip, the gullet, lower part of the cheeks, throat, and chest white, varied with small, darker spots. The upper edge and base of the outer sides of the ears white.

*Hab.* Sunia, on the upper parts of the Cordilleras.

Mr. Buckley declares that this young specimen was obtained along with its mother, an adult female of the Grey-cheeked Tapir, from Sunia. This was secured because it would not leave its young; and therefore they were more easily caught. If there is not some mistake in this account, which one can hardly doubt, it must be the young of that species; but it is so exceedingly different that I think it better to give it a provisional name, as the difference between the young and the rather older specimen of this species is so great that I do not believe such has ever been observed in any group of species of Mammalia.

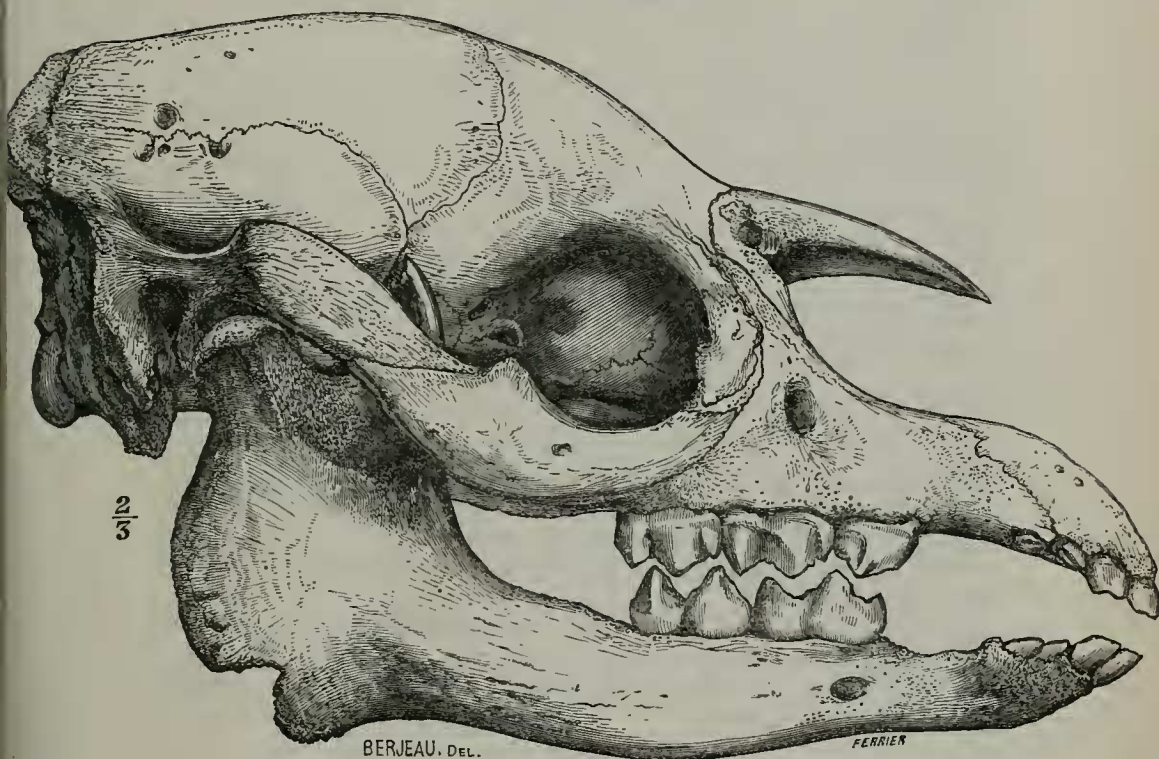
Thus, for example:—

1. The temple and cheeks are brown like the rest of the body; whereas in the half-grown but spotted specimen they are, including the ears, as in the adult, pale whitish.

2. The back has two straight lines of spots; sides with an upper series of spots, forming a rather irregular line from the back of the shoulders to the front of the haunches, and very numerous spots which are placed below the lines in irregular series, and placed in very different directions; the fore legs have an irregular perpendicular stripe above, and the hind legs are marked with irregularly disposed oblong spots; whereas in the half-grown grey-cheeked specimen they are brown, with only three series of spots on each side, forming more or less irregular lines, the second one from the top being most irregular, the two upper ones being continued over the thighs towards the rump.

3. The upper lip, the whole underside of the head and throat, the lower part of the side of the head, and the whole chest white, more or less clouded with brown spots; whereas in the young with stripes, and the adult *T. leucogenys*, the white of the cheeks only extends to the back of the under part of the head; the throat, underside of neck, and the chest are brown like the rest of the animal.

I know no such transformation in the disposition and form of the colour in any other mammal in passing from youth to age. The spots are obliterated; and sometimes the coloured part becomes altered or obliterated; but I know no instance of the disposition and character of the colour being changed as occurs in these two specimens. If Mr. Buckley's account is correct and this is the very young state, it is an entirely new fact in the study of Mammalia.



Skull of *Tapirus leucogenys*.

The skull of this young specimen has a very short face, and a globular brain-case, which is rather convex on its upper surface in the central line, and raised above the plane of the nose, much more like the skull of *T. terrestris* than that of *T. leucogenys*. The skull of the half-grown lined specimen has a small brain-case with a flat upper surface, very like the skull of the adult of that species, which is also the case with the young spotted specimen of *T. pinchacus* in the Paris Museum, brought by M. Gondot and figured by Blainville. I do not lay much stress on this difference in the form of the young and adult animal from the half-grown and adult specimen of *T. leucogenys*, as I have not been able to form a series showing the changes the skull of Tapirs undergoes during growth from the very young state to adult age; but certainly the form of it and the half-grown are so exceedingly different that I think it well they should be described.

If this specimen should be proved to be the proper young of *T. leucogenys*, it shows that there is less difference between the two sections of the genus in the very young than in the half-grown and adult animals.

Mr. Buckley brought a young male striped specimen from Macas (No. 13). This animal evidently belongs to the same section as *T. terrestris*, but it is so different from the young of that species that it is certainly a very distinct local variety or else a distinct species of that animal. It may be thus described:—

**TAPIRUS ECUADORENSIS.** (Plate XXII. fig. 2.)

Young blackish brown; throat, lower part of cheeks, chest, and belly yellow. Back with two interrupted lines, or narrow longitudinal stripes, rather diverging from one another, and near together on the shoulders and rump. Sides with four more or less interrupted yellowish streaks, the uppermost one with two oblique, elongated stripes in front, and a much longer, longitudinal stripe behind. The second one with one oblique, elongated spot in front, and with a very long streak ascending across the thighs to the base of the tail, with an oblique streak from the former, at the front of the thigh, continued to the rump. The two lower series of spots on the sides and thighs formed of very unequally long spots, those on the shoulders being very obliquely placed. The fore legs with one or two oblong transverse spots on the upper part, and the hinder ones with unequal, different-sized spots to the base of the toes. The edges of the ears and a few small spots under and behind the eyes white.

*Hab.* Ecuador, Macas, on the river Macas, one of the branches of the Upper Amazons.

The nose, the whole upper part of the head, and the back of the neck are dark brown like the rest of the body, very unlike the many-spotted head of the young *T. terrestris*; and it looks like a bigger animal than that species.

**TAPIRUS TERRESTRIS.** (Plate XXII. fig. 3.)

The young of *T. terrestris* in the British Museum, which has no particular habitat, is very differently marked. It has two nearly continuous stripes on the middle of the back, which are united and arched behind on the loins, with some transverse spots above and below it. There are two longitudinal stripes on the upper part of each side, which unite behind and are continued in a single line to the upper part of the base of the tail. The whole head, the upper part of the neck, the sides, the outside of the fore and hind legs, and the inside of the feet are covered with very differently sized, shaped, and disposed white spots, those on the shoulders and thighs being elongate, those on the lower part of the sides being elongate and obliquely placed, and those between the upper lateral stripes and on the head and neck very small as compared with the others on the chin, the throat, the whole chest, and the under part and the inner side of the fore legs.